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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,760	04/15/2002	Renato J. Recio	10003629-2	4255

22879 7590 06/01/2004

HEWLETT PACKARD COMPANY  
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EXAMINER

LUU, LE HIEN

ART UNIT PAPER NUMBER

2141

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

**Application No.**

09/980,760

**Applicant(s)**

RECIO ET AL.

**Examiner**

Le H Luu

**Art Unit**

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04-15/2002 - 05/12/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/24/02; 5/12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

1. Claims 2-25 are presented for examination.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-5, 10-12, 14-17, are 22-24 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by **Chiussi et al. (Chiussi)** patent no. **5,701,292**.

4. As to claim 2, Chiussi teaches the invention as claimed, including a distributed computer system comprising:

links (col. 3 lines 39-45; connections in the network); and

end stations coupled between the links, wherein types of end stations include endnodes which originate or consume frames and routing devices which route frames between the links, wherein the end stations include a first source endnode which originates frames at a variable injection rate (col. 3 lines 48-65), wherein the first source endnode includes:

a congestion control mechanism responding to detected congestion by multiplicatively decreasing the variable injection rate (col. 4 lines 17-21; col. 4 line 58 - col. 5 line 11).

5. As to claims 3-5, Chiussi teaches the variable injection rate (IR) is multiplicatively decreased according to  $IR(i+1) = IR(i) * (1/F1)$ , wherein F1 is a constant. Chiussi also teaches the congestion control mechanism responds to detected subsiding of congestion by multiplicatively increasing the variable injection rate wherein the variable injection rate is multiplicatively increased according to  $IR(i+1) = IR(i) * F2$  wherein F2 is a constant (col. 4 line 58 - col. 5 line 11; col. 6 lines 33-37).

6. As to claims 10-11, Chiussi teaches at least one routing device includes a congestion control mechanism detecting congestion on a path the frames route through the at least one routing device; and wherein the at least one routing device includes receive and send port resources, and wherein the at least one routing device's congestion control mechanism detects congestion by analyzing the receive and send port resources (col. 1 lines 14-54).

7. As to claim 12, Chiussi teaches at least one routing device includes: a congestion control mechanism responding to detected congestion by dropping frames that are marked droppable for a time period (col. 1 lines 14-54)

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6-9, 13, 18-21, and 25 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Chiussi et al. (Chiussi)** patent no. **5,701,292**, in view of **Lauck et al. (Lauck)** patent no. **5,734,825**.

10. As to claim 6, Chiussi teaches the invention substantially as claimed as discussed above. In addition, Chiussi teaches the end stations include a first destination endnode which consumes frames originated from the first source endnode, wherein the routing device includes: a congestion control mechanism detecting congestion on a path the frames route from the first source endnode to the first destination endnode (col. 4 line 58 - col. 5 line 11 ). However Chiussi does not explicitly teach the destination endnode includes a congestion control mechanism for detecting congestion.

Lauck teaches end-to-end flow control has a destination end station detects congestion is occurring in the network (col. 1 line 59 - col. 2 line 3).

It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of Chiussi and Lauck to provide a congestion control mechanism for detecting congestion at the destination endnode because it would control transmission rate of source endnode.

11. As to claim 7, Lauck teaches the first destination endnode's congestion control mechanism detects congestion based on Forward Explicit Congestion Notification (FECN) conditions, and forwards the FECN conditions to the first source endnode (col. 1 line 59 - col. 2 line 3).

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12. As to claims 8-9, Lauck teaches the end stations include a first destination endnode which consumes frames originated from the first source endnode, wherein the first source endnode's congestion control mechanism detects congestion on a path the frames route from the first source endnode to the first destination endnode by monitoring a previous variable injection rate and a round trip time for a frame to reach the first destination endnode and an acknowledgement (ACK) for the same from the first destination endnode to reach the first source endnode and the first source endnode's congestion control mechanism detects congestion on a path the same route from the first source endnode by monitoring acknowledgement (ACK) timeouts (col. 8 lines 46-65; col. 13 lines 40-44).

13. As to claim 13, Lauck teaches at least one routing device includes: a congestion control mechanism responding to detected congestion by applying link back pressure by reducing a number of credits available for routing frames through the routing device from a link (col. 14 lines 14-29; col. 14 line 66 - col. 15 line 2; definition of CB begins col. 16 line 52).

14. Claims 14-23 have similar limitations as claims 2-13; therefore, they are rejected under the same rationale.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Le H. Luu, whose telephone number is (703) 305-9650.

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The examiner can normally be reached Monday through Friday from 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia, can be reached at (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7240.

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for formal communications; please mark "EXPEDITED PROCEDURE").

Or:

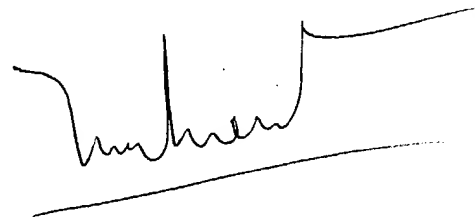
(703) 872-9306 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).



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A handwritten signature in black ink, appearing to read 'Le Hien Luu', is written above a horizontal line.

LE HIEN LUU  
PRIMARY EXAMINER

May 25, 2004